

Handbook of Infrared Astronomy

Infrared astronomy is a dynamic area of current research. It has been revolutionized in the past few years by the advent of large, sensitive, infrared arrays and the success of several infrared satellites. This handbook provides a clear, concise and accessible reference on all aspects of infrared astronomy. Throughout the book, the emphasis is on fundamental concepts, practical considerations and useful data.

Starting with a review of the basic infrared emission mechanisms, we are shown how the Earth's atmosphere affects and limits observations from ground-based telescopes. The important systematics of photometric accuracy are treated in detail. Spectroscopy – both stellar and otherwise – is explained, and illustrated with useful examples. An important chapter is devoted to dust, which plays such a central role. Finally, the technical background to infrared instrumentation is covered to help the reader develop a proper understanding of the capabilities and limitations of infrared observations.

This volume provides both an essential introduction for graduate students making infrared observations or reducing infrared data for the first time, and a convenient reference for more experienced researchers.

Ian Glass obtained his first degree at Trinity College Dublin and his PhD at the Massachusetts Institute of Technology. Following postdocs at MIT and Caltech, he spent five years at the Royal Greenwich Observatory. He has authored over 170 papers in astronomical journals and conference proceedings and is currently Head of Instrumentation at the South African Astronomical Observatory. Also fascinated by astronomical history, he has recently written *Victorian Telescope Makers: the Lives and Letters of Thomas and Howard Grubb* (IOP Publishing, Bristol and Philadelphia, 1997).

Cambridge Observing Handbooks for Research Astronomers

Today's professional astronomers must be able to adapt to use telescopes and interpret data at all wavelengths. This series is designed to provide you with a series of concise, self-contained handbooks which cover the basic principles peculiar to observing in a particular spectral region, or to using a special technique or type of instrument. The books can be used as an introduction to the subject, and as a handy reference – for use at the telescope, or in the office. They also promote an understanding of other disciplines in astronomy and a modern, multi-wavelength, multi-technique approach to research. Although aimed primarily at graduate students and researchers, many titles in the series are of interest to keen amateurs and undergraduate students.

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To Hettie

Celestial rosy red, love's proper hue

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